



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

646.3015

Job Sheet 205075



Part No: 646.3015

Job Qty: 30 pcs

Part Name: Blade



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 12/27/19

Job Tracking No:

Due Date: 2/21/20

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV N/C SHEET 12 IPP REV:A NEW ISSUE 12/11/09 JFS VERIFY BY: JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Bandsaw - 1	30 pcs		2/21/20	0.00	0.47	Bandsaw - 1		J.C.L. 20-01-11
110	HAAS 4 Axis - B4B	30 pcs		2/21/20	0.18	37.64	HAAS - 1 - B4B		HA / J.C.L. 20-01-14
							HAAS - 2 - B4B		
							HAAS - 3 - B4B		
							HAAS - 4 - B4B		
120	QC 2	30 pcs		2/21/20	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 57		
							QC 2 - 62		



Container No: S246696



Part: 646.3015

Job No: 205075

Serial No/Batch: S246696

Revision: Rev NC

Inspector:

Exp Date:

Instructions: Various STC's

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 01/11/20

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					QC 2 - 63		
					QC 2 - 8		
					QC 2 - 66		
					QC 2 - 64		
					QC 2 - 65		
					QC 2 - 5		
					QC 2 - 71		
					QC 2 - 73		
					QC 2 - 69		
					QC 8 - 12	mk 20/01/18	
					QC 8 - 14		
					QC 8 - 17		
					QC 8 - 20		
					QC 8 - 25		
					QC 8 - 3		
					QC 8 - 32		
					QC 8 - 33		
					QC 8 - 35		
					QC 8 - 39		
QC 8 - 4							
QC 8 - 44							
QC 8 - 45							
QC 8 - 49							
QC 8 - 58							
QC 8 - 8							
QC 8 - 9							
QC 8 - 68							
QC 8 - 67							
QC 8 - 1 (A)							
QC 8 - 47							
QC 8 - 40							
QC 8 - 52							
QC 8 - 23							
QC 8 - 57							
QC 8 - 76							
QC 8 - 61							
140 Outsource - 1 - Heat Treat	30 pcs	2/21/20			MEI001-VC	15	2020-01-21
150 Packaging 2-1 - Receive - B4B	30 pcs	2/21/20	0.00	0.00	Packaging 2 - 1 - B4B		JAN 30 2020
					Packaging 2 - 2 - B4B		
					Packaging 2 - 3 - B4B		
					Packaging 2 - 5 - B4B		
					Packaging 2 - 4 - B4B		
					Packaging 2 - 6 - B4B		
					Packaging 2 - 7 - B4B		
					Packaging 2 - 8 - B4B		
					Packaging 2 - 9 - B4B		
					Packaging 2 - 10 - B4B		
					Packaging 2 - 11 - B4B		
					Packaging 2 - 12 - B4B		
					Packaging 2 - 13 - B4B		
					Packaging 2 - 14 - B4B		
					Packaging 2 - 15 - B4B		
					Packaging 2 - 16 -		
					Plex 12/27/19 1:09 PM Dart.lajeunesse.marie		

					B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	
					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	
					Packaging 2 - 27 - B4B	
					Packaging 2 - 28 - B4B	
					Packaging 2 - 29 - B4B	
					Packaging 2 - 30 - B4B	
					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
					Packaging 2 - 36 - B4B	
					Packaging 2 - 37 - B4B	
155 QC 6	30 pcs	2/21/20	0.00 0.00	QC 6 - 9		DAS
				QC 6 - 68		68
				QC 6 - 61		9-89
				QC 6 - 40		
				QC 6 - 81		DAS
160 Spray Paint - 2 - B4B	30 pcs	2/21/20	0.00 0.97	Spray Paint - 1 - B4B		41 FEB 04 2020
				Spray Paint - 2 - B4B		9-89
				Spray Paint - 3 - B4B		
				Spray Paint - 4 - B4B		
162 QC 14	30 pcs	2/21/20	0.00 0.00	QC 14 - 15		
				QC 14 - 2		
				QC 14 - 34		
				QC 14 - 41		
				QC 14 - 51		
				QC 14 - 58		
				QC 14 - 59		
				QC 14 - 9		
				QC 14 - 68		
				QC 14 - 40		
				QC 14 - 19		
				Plex 12/27/19 1:09 PM Dart.lajeunesse.marie		

180 Packaging 3-1 - Stock - B4B	30 pcs	2/21/20	0.00	0.00	QC 14 - 43	
					QC 14 - 24	
					QC 14 - 61	
					QC 14 - 81	
					Packaging 3 - 1 - B4B	FEB 10 2020
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	DAS 74 9-89
					Packaging 3 - 5 - B4B	FEB 11 2020
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 -	

				B4B	
				Packaging 3 - 36 - B4B	
				Packaging 3 - 37 - B4B	
190 QC 21 - SA	30 pcs	2/21/20	0.00 0.00	QC 21 - SA - 21	FEB 11 2020
				QC 21 - SA - 70	
				QC 21 - SA - 53	

Part Op 100 - Cut Blank at 6.580"

Descriptions: 110 - 1-Machine per folio FB150

120 - (QC2- Inspect parts off machine FAI/FAIB)

130 - (QC8- Inspect parts - second check)

140 - FINISH: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS As per dwg 646.3000 PART ARE MADE FROM AISI A2 TOOL STEEL DETAIL OF C OF C REQUIRED

150 - (Receive & Inspect for Damage & Mat'l Certs)

155 - (QC6- All purchased or subcontracted products)

160 - (Spray Paint / NDT Room) PRIME AS PER DWG, SEE NOTE #4 5236137

162 - (QC14- Inspect Spray Paint)

180 - (Identify as per dwg & Stock Location: _____) ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***

190 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MSTEEL-A2-B0.500X1.250	AISI A2 Tool Steel Bar, 0.500 X 1.250	16.3500 ft (.545 ea)	100-Bandsaw - 1	5242150

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Bandsaw - 1	MSTEEL-A2-B0.500X1.250	16	92	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Blade	0.375inches $\pm$ 0.005	0.380 0.370		.377
2	Blade	0.177inches + 0.005 - 0.000	0.182 0.177	Diameter	.178
3	Blade	0.940inches $\pm$ 0.010	0.950 0.930		.940
4	Blade	0.524inches $\pm$ 0.005	0.529 0.519		.524
5	Blade	0.240inches $\pm$ 0.020	0.260 0.220		.240
6	Blade	0.125inches $\pm$ 0.005	0.130 0.120	Radius	.125
7	Blade	45.000Degrees $\pm$ 0.500	45.500 44.500		.45°
8	Blade	0.524inches $\pm$ 0.005	0.529 0.519		.524
9	Blade	0.690inches $\pm$ 0.002	0.692 0.688		.690
10	Blade	1.250inches $\pm$ 0.002	1.252 1.248		1.250
11	Blade	4.684inches $\pm$ 0.005	4.689 4.679		4.684
12	Blade	6.450inches $\pm$ 0.010	6.460 6.440		6.440
13	Blade	0.325inches $\pm$ 0.005	0.330 0.320		.325
14	Blade	30.000Degrees $\pm$ 0.500	30.500 29.500		30°

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____			MRB (QSI042)
Description Work Order Deviation		Disposition			Completed By Lead hand / Supervisor QC / QA Coordinator
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
		Other/Details:			



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB045640



Supplier: MEI001-VC
Metcor Inc.
560 Boul. Arthur Sauve
Saint-Eustache
QC
J7R 5A8 Canada
Phone: 450 473 1884
Fax: 450 491 5498

Attention: Bejenaru, Livia

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB045640

PO Date: 1/21/20

Due Date: 2/11/20

**Purchase Order
Revision:**

Revision Date:

Ship-To Contact: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

E-MAILED
2020-01-22

Items

Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	203824	646.3013	646.3000 Rev N/C	Blade : Various STC's ISSUE P/O: FINISH: HEAT TREAT TO 58- 62 RC ROCKWELL HARDNESS As Per Dwg 646.3000 PART ARE MADE FROM AISI A2 TOOL STEEL	Firmed X30	-	2/11/20	30 pcs	0 pcs	30 pcs	\$3.5638/pcs	\$106.91
2	205075	646.3015	646.3000 Rev NC	Blade : Various STC's FINISH: HEAT TREAT TO 58- 62 RC ROCKWELL HARDNESS As per dwg 646.3000 PART ARE MADE FROM AISI A2 TOOL STEEL DETAIL OF C OF C REQUIRED	Firmed X30	-	2/11/20	30 pcs	0 pcs	30 pcs	\$3.5638/pcs	\$106.91
	205090				Firmed	-	2/12/20	10 pcs	0 pcs	10 pcs	\$3.5638/pcs	\$35.64
JAN 30 2020								Sub Total:	40	0	40	\$142.55

Plex 1/22/20 10:42 AM Dart.Guerin.Kimberley



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Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB045640



Items												
Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	203832	646.3014	646.3000 Rev N/C	Blade : Various STC's ISSUE P/O: FINISH: HEAT TREAT TO 58- 62 RC ROCKWELL HARDNESS As Per Dwg 646.3000 PART ARE MADE FROM AISI A2 TOOL STEEL	Firmed <i>X24</i>	-	2/11/20	24 pcs	0 pcs	24 pcs	\$3.5638/pcs	\$85.53
Grand Total:												\$335.00

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 1/22/20 10:42 AM Dart.Guerin.Kimberley

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
342327	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
HB045640	N/A	A2		
<u>SPÉCIFICATIONS DU PROCÉDÉ</u> processing specifications				
VAC HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results	
HARDNESS	58 - 62 HRC	5 (907)	61 - 62 HRC	

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
94	31	646.3000 (30) 646.3013 JOB 203824 DWG: 646.3000 REV N/C (30) 646.3015 JOB 205075 DWG: 646.3000 REV N/C (24) 646.3014 JOB 203832 DWG: 646.3000 REV N/C (10) 646.3015 JOB 205090 DWG: 646.3000 REV N/C 1 BC = 5 BC

COMMENTAIRES / comments

VAC HARDEN 1800°F - 1:00 HRE
DOUBLE TEMPER 400°F - 2:00 HRS

Heat treatment (HT) was performed with equipment that meets the requirements of requested specification. All HT operations were performed in compliance with the required HT specification and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with the material specification and the purchase order and was found to meet the requirements.

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Le traitement thermique (TT) a été fait en utilisant des équipements en conformité avec la spécification demandée. Toutes les opérations de TT ont été faites en conformité avec les requis de la spécification demandée et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

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Certificat de Conformité Détaillé

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BON DE TRAVAIL order	CHARGEMENT load
342327	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

1

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec les spécifications du matériel et le bon de commande et le matériel rencontre les exigences spécifiées.

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APPROUVÉ par / Approved by:

DATE: 2020-01-28

Lucie Desmarais
QA Technician



METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Reçu de livraison

Delivery Receipt

BON DE TRAVAIL Order	EXPÉDITEUR Shipper ID	BON D'EXPÉDITION Shipper
342327	1	143160

EXPÉDITION COMPLÈTE / Shipped Complete

CLIENT /Customer 215

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053



LIVRÉ À /Shipped To

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

COMMANDE DU CLIENT Customer PO	BON DE LIVRAISON DU CLIENT Customer Shipper No.	TYPE DE MATÉRIEL Material Type	DATE DE LA COMMANDE Order Date	TRANSPORTEUR Carrier
HB045640		A2	2020/1/21	client

QUANTITÉ Quantity	No. PIÈCE / Part No.	NOM DE LA PIÈCE / Part Name	DESCRIPTION DE LA PIÈCE Part Description	POIDS Weight
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94 646.3000 31,

(30) 646.3000 JOB 203824 ✓

(30) 646.3000 JOB 205075 ✓

(24) 646.3000 JOB 203832 ✓

(10) 646.3000 JOB 205090

1 BC = 5 BC

TYPE DE CONTENEUR Container Type	# DE CONTENEURS # Of Containers	COMMENTAIRES CONTENEUR Container Comments
	1	1bc=5bc

EXPÉDIÉ PAR: Shipped by:	
-----------------------------	--

QUANTITÉ EXPÉDIÉE / Quantity Shipped : 94

POIDS EXPÉDIÉ / Weight Shipped : 31,00

QUANTITÉ RESTANTE / Quantity Remaining : 0

POIDS RESTANT / Weight Remaining : 0,00

RECEIVED

JAN 29 2020

DART AEROSPACE LTD.

QUANTITÉ EXPÉDIÉE /Quantity Shipped: 94

POIDS EXPÉDIÉ / Weight Shipped : 31,00

Signature:

Date: